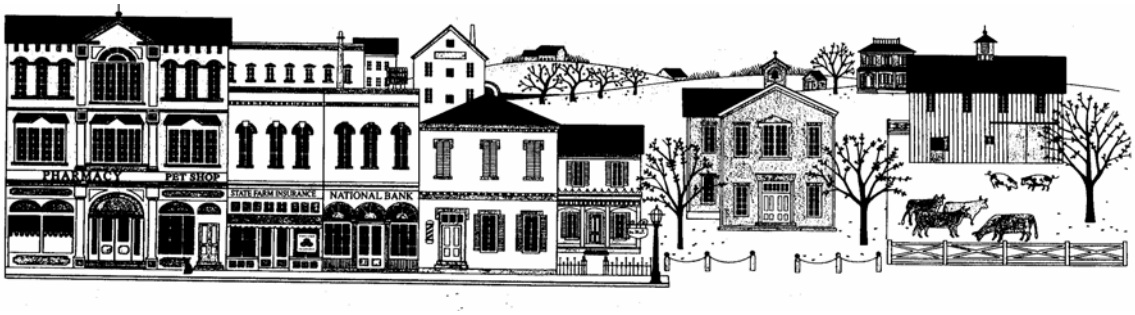
Chapter 10- Transportation



Fauquier County, Virginia

Department of Community Development

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CHAPTER 10-TRANSPORTATION

INTRODUCTION

The purpose of this chapter is to set forth a plan which will ensure that the transportation system and infrastructure needs of the planned population are accommodated and coordinated with the service districts, villages and rural areas countywide. The transportation systems planning, identified improvements, recommendations and their implementation are critical to the success of the service district concept, and also to the preservation of the County's valued small village and settlement scaled communities and rural areas.

When planning for the future, few elements have as much impact as the development of roads and other elements of the overall transportation system. The face of Fauquier County will be determined to a large degree by the placement of roads. Roads provide the ability to travel, the ability to transfer goods and services, and the ability to develop property. The County's transportation system should enable citizens to have access to employment centers and public facilities; make a contribution to the needs of the region; and have minimal impact on the County's natural environment.

The recent update and adoption of the Bealeton, Calverton, Catlett, Marshall, Midland, New Baltimore, Opal, Remington and Warrenton Service District elements of the Comprehensive Plan, established important building blocks for the future transportation system for Fauquier County. To insure the effective and timely implementation of key elements of each service district plan, it was necessary to further refine and to better integrate key elements regarding roadways, bike paths, airport access and future Virginia Railway Express (VRE) service into the Transportation Plan. A future step in this iterative and building block approach will be to better integrate the County's rural areas into this systems approach.

Here the typical VDOT roadway planning process has been modified in view of the need to more effectively separate local and regional traffic and limit its impact on more populated service districts. This chapter combines the adopted transportation general elements for each of the referenced nine Service Districts into one plan, along with key recommendations. It also

incorporates the County's unique program to better integrate land use and transportation decisions.

This chapter also represents the staging component for the transportation element of each service district plan. Included are short term prioritized strategic actions necessary to implement key plan elements. This document can therefore be used in making County recommendations to VDOT for the Transportation Improvement Program (TIP), as well as safety improvements. The plan also establishes the model for countywide strategic transportation planning. As a result, this chapter includes planning and recommendations focused on the following subjects:

- Roadways
- Bus and rail service (VRE)
- Airport expansion and access
- Bike paths

GENERAL POLICY GUIDELINES FOR TRANSPORTATION SYSTEMS

The following are general policy guidelines for the development of transportation systems within the County. In order to plan and provide adequate transportation systems within the County these general policy guidelines should be adhered to.

General Policy Guidelines

- Create a transportation system which reinforces a clustered and compact form of growth in the County's Service Districts, Villages, and Settlements as set forth in Chapters 6 and 7 of this Comprehensive Plan.
- Continue to work with the Virginia Department of Transportation (VDOT), the Commonwealth Transportation Board and the private sector, to provide a well planned highway multimodal transportation system. This system should have design capacities that will not cause excessive traffic congestion and should preserve the scenic, natural, and historic qualities of the County.

- Maintain and improve the functioning of the rural freeway and major arterial highway system arterials and major collectors by keeping access points to a minimum and requiring developments to build supplemental roadway systems and share inter-parcel access roads.

- Plan and develop a road system which will, to the extent possible, divert local trips away from the rural freeway and major arterial highway systems.

- Discourage non-essential alterations to scenic, agricultural, and historic areas or roads that traverse such areas.

- Use the County's Transportation Plan as a guide for County input to the VDOT Six Year Plan.

- Implement regulations within the Zoning and Subdivision Ordinances so that future development provides sufficient right-of-way and the construction of all roads in a manner that would permit the inclusion in Virginia Department of Transportation system of roads or highways. Examine applications for rezoning for their transportation impact and, where appropriate, road dedications and improvements should be proffered in accordance with VDOT's 2005 subdivision street requirements and subsequent revisions. By identifying road improvement needs early, the County could avoid costly condemnation proceedings.

- Upgrade secondary roads, which are classified to Major Collectors, to eliminate dangerous situations and to accommodate increased traffic flow.

- Accurately classify and obtain appropriate right-of-way for major secondary roads in and around the service districts in order to meet future anticipated traffic loads resulting from planned development.

- Functionally classify all roads within the County to reflect a logical pattern of interconnected roadways based on concentrations of population and linkages to various areas through out the County.

- Encourage ride sharing and car pooling. Identify appropriate locations and designs for commuter parking lots.

- Encourage the development and use of local and express bus service.

- Consider supporting the appropriate location and development of a commuter rail stop(s) in the County through the Virginia Railway Express and coordinate such planning efforts through the Virginia Department of Rail and Public Transportation.

- Develop bike and pedestrian trails to serve as transportation systems within service districts and between housing nodes and community centers. Locate these pedestrian systems in areas designated within the Comprehensive Plan and the Department of Parks and Recreation Trails Plan.

PLANNING ROLE OF "VDOT" AND THE COUNTY

The Virginia Department of Transportation (VDOT) has primary responsibility for the location, construction, and maintenance of roadways within the County. The County's role is to ensure that VDOT adheres to the County's Comprehensive Plan and that roads are sized and located to keep pace with development, thereby assuring the safety of the general public.

In addition, the County utilizes the expertise of VDOT planning officials as well as consulting assistance in planning the County's road network both for local and regional transportation systems.

In fulfilling its role, the County makes recommendations through the Culpeper District and to the Commonwealth Transportation Board as a part of the biannual review of VDOT's six-year primary and secondary road improvement schedule. As a part of these recommendations, the County's objective is to ensure that the VDOT building program accommodates the County's Comprehensive Plan, land use and transportation priorities.

EXISTING PUBLIC TRANSPORTATION

Rail Service

At present, rail service in the County is limited to freight. Southern Railway maintains a mainline track through the County roughly paralleling Route 28. From this mainline there currently exists The Warrenton Branch, a short spur connecting an industrial quarry located between Calverton and Warrenton to the mainline at Calverton. The spur once connected the Town of Warrenton to the mainline; however, those rails were removed in 1990 due to a lack of ridership. The portion of the spur that connected the quarry to Warrenton is in the process of being converted to recreational uses.

Virginia Railway Express (VRE) service is available to our residents in Prince William County (Manassas Airport/Broad Run) and Stafford County (City of Fredericksburg) providing service to Union Station in Washington, D.C.

Southern Railway also maintains a rail line that roughly parallels Route 55 and provides freight service for The Plains, Marshall, and Markham in the northern portion of the County.

Air Transportation

While there are several airfields/landing strips within the County, mostly privately owned, only the Warrenton-Fauquier Airport, in Midland, which was acquired by the County in 1992, has general utility facilities. This Airport is shown in the Virginia Air Transportation System Plan (VATSP) as a designated Reliever Airport.

Reliever Airports are designated by the FAA to reduce congestion at commercial service airports by providing alternative general aviation facilities. To accommodate the full range of general aviation aircraft, Reliever Airports should be developed to transport design criteria when feasible. Transport design means that airports are designed to accommodate business jets and transport type aircraft.

The County currently owns the Airport, and the Comprehensive Plan identifies the surrounding area designated in the Midland Service District planned for industrial uses. The Airport is

expected to continue to be an asset to the County as air passenger and cargo services grow in importance.

EXISTING COMMUTING SERVICES

Rideshare/Vanpool

It is anticipated that ridesharing will generally increase in importance, especially in counties such as Fauquier County which lie on the outskirts of the greater Northern Virginia region.

Fauquier County is served primarily by Vanpool Services which runs several vans into the Washington, D.C. area, and the Rappahannock-Rapidan Commuter Services. The latter is organized by the Rappahannock Rapidan-Regional Commission (RRRC; PD-9) and is a rider matching service that works in conjunction with Metropolitan Washington Council of Government's (MWCOG) Commuter Club, the largest and most experienced of the ridesharing programs. (RRRC van or carpool information is available at www.rrregion.org).

Commuter Parking

Commuter park-ride facilities are parking lots constructed along interstates, primary, and major secondary roadways used by commuters as a primary travel path to work. The most effective location for a park-ride facility is at the crossroads of major highways. Commuter park-ride facilities may range from simple graded lots to landscaped lots. They do not have to be newly constructed facilities but can be established in regional shopping centers, churches, or other facilities that have sufficient surplus parking.

There are five Virginia Department of Transportation (VDOT) commuter parking lots in the County. The first is located near I-66 in Marshall off Main Street and at the end of Frost Street; the second is located in Markham, near I-66, but on Route 688; and another is on U.S. 15/29 north of Warrenton at its intersection with Colonial Road; the fourth is found on U.S. 15/29 at its intersection with Route 651 near Remington; while the fifth is located in Midland, just off Route 28.

EXISTING TRANSPORTATION NETWORK

Introduction

State and Federal highways provide the primary routes within and through the County and include the following:

Virginia Routes	U.S. Routes
17	17
28	15
50	29
55	211
215	I-66
245	

The U.S. Highways and Interstate 66 are the most important routes traversing the County: Interstate 66 provides an important linkage between Washington D.C., I-95, and the Shenandoah Valley I-81 traffic corridors. Route 17 is a major route connecting I-95 and I-66. U.S. 29/15 serves as a major north-south route along the eastern edge of the Piedmont area. Route 211 is a major east-west connector providing access through neighboring Culpeper and Rappahannock Counties to Skyline Drive and I-81 from Route 29.

As of December 31, 1986 there were 100.22 miles of State designated primary roads and 749.15 miles of State designated secondary roads (68% of the total County road system). Hard-surfaced roads accounted for 484.76 miles of the system, all weather and light surface roads accounted for 263.44 miles, and un-surfaced roads accounted for only 0.95 miles of the system.

FUNCTIONAL CLASSIFICATION OF ROADS AND DESIGN POLICIES

VDOT groups roads together according to function, and level of services they are intended to provide. This Plan, while in accordance with the State classification system, uses slightly different designations based on land use implications and classifications.

Interstate System: Federal regulated U.S. freeway system primarily intended to serve inter-state traffic via high speed limited access roadway network with grade separate interchanges. I-66 is located in Fauquier County extending west to I-81 in Shenandoah County and east to I-495 and I-95 in Prince William and Fairfax Counties.

All design policies are set by FHWA and VDOT.

Primary System:

1. Rural Freeways: Designed to serve high volumes of through traffic between adjacent counties, towns and service districts. Freeways are limited access roads intended for high speed travel and are multi-lane divided facilities, typically with grade-separated inter changes. Freeways also serve both intra-state and inter-state traffic.

   Design Policies

   a) Limited access road; direct access to individual adjacent properties is prohibited.

   b) Pedestrian access should be prohibited from individual adjacent properties. However, separate pedestrian/bicycle crossing facilities may be appropriate at specific interchange or overpass/underpass facilities.

   c) Engineering and design standards for Freeways shall conform to VDOT rural standards.

   d) Typically Rural Freeways have between 212 and 300 feet of right-of-way.

2. Rural Principal Arterial: Designed to serve or supplement traffic flows between rural freeways and rural minor arterials for moderate to long distance corridor travel. Such travel patterns would include intra-state and inter-state routes and should have a minimum of

interference by traffic movements. Rural Principal Arterials are typically multi-lane facilities or undivided highways. Traffic volumes on these roads may reach 2,500 to 5,000 or more vehicle trips per day or higher.

Design Policies

a) With the primary sanction of Rural Principal Arterial being the movement of traffic, access for individual properties must be a secondary consideration.

b) Access from adjacent properties should be obtained via various access management techniques (i.e., service roads, shared access points, internal roads, and frontage roads). In addition, a limitation on the number, spacing, and location of signalized or grade separated access points should be utilized.

c) Minimum recommended signalized cross street intersection interval is 1,000 feet.

d) Minimum recommended street crossover without signals for divided arterials is 1,300 feet.

e) Private entrances shall be at least 500 feet from a crossover and shall be either directly aligned with a crossover or as far away from the crossover as possible in accordance with VDOT entrance/exit standards.

f) Travel lanes shall be a minimum of 12 feet in width. Principal arterials which are constructed to rural design standards shall have improved shoulders with either aggregate or paved surface.

g) No on-street parking will be permitted.

h) Pedestrian access should be prohibited on Rural Principal Arterials. See pedestrian comments under the Rural Freeway Section.

i) Typically, Principal Arterials have 160 feet of right-of-way.

j) Turn lanes, traffic channelization, restricted turning movements, signs, and signals should be utilized to minimize turning movement conflicts.

3. Rural Minor Arterial: The function of these roads is to link major arterial and secondary roads in more urban areas with towns not situated on Rural Principal Arterial routes and to form a network providing intra-state and inter-county service. This system is designed to provide relatively efficient access, even though in many cases multi-lane facilities will not be required. In addition, roads designated as Rural Minor Arterials may serve as connectors between Rural Principal Arterials or where heavy travel demand requires a greater right-of-way secondary road. These roads typically handle 3,500 to 5,000 vehicle trips per day or more.

Design Policies

a) Discourage direct access by individual property owners. Encourage the use of access management techniques (i.e., service roads, shared access points, internal roads, and frontage roads). In addition, a limitation on the number, spacing, and location of access points should be utilized.

b) Minimum recommended cross street separation for signalized and major intersections is 800 feet.

c) Minimum recommended street cross-over without signalization is 1,000 feet.

d) Private entrances should be at least 500 feet from a crossover and be either directly aligned with the crossover or as far away from the crossover as possible in accordance with VDOT entrance/exit standards.

4. Rural Minor Arterials range from 80 to 160 feet of right-of-way width.

Secondary System

1. Urban Collector: These highways provide access and traffic circulation within residential/subdivision, commercial, and industrial areas. They collect local traffic and distribute it to the Rural Minor Arterial system. The character of these roads will vary

depending on the areas and functions they will serve. Some of these roads may take on a boulevard character with trees lining the road, wide medians, adequately spaced entry points, and low speeds. Others will serve a more highway oriented function and will characteristically have higher speed limits, and fewer points of entry. The exact character of these roads will be determined as a part of the development process. However, unique and original designs will be encouraged in subdivisions particularly as long as these roads can safely provide for transportation needs.

Design Policies

a) The standard cross-section for urban collectors includes sidewalk, curb, and gutter.

b) Travel lanes have a minimum of 10 foot width with 12 foot width being desirable.

c) Sidewalks to facilitate pedestrian access to commercial, retail, or civic uses shall be provided. Pedestrian facilities should be provided to accommodate walk/jog/bike trails. Sidewalks to facilitate pedestrian access to commercial, retail, civic and other residential uses should be provided, except where the character of the area suggests otherwise.

d) On-street parking should be prohibited.

e) Individual lot access should be carefully reviewed for impacts on the overall functioning of the roadway.

f) Urban collectors typically have between 60 and 110 feet of right-of-way.

2. Urban Local: These streets provide direct access to adjacent land and provide access to the higher functional classification systems. Service to through traffic is discouraged.

Design Policies

a) On-street parking may be permitted.

b) Urban local streets typically have between 50 and 60 feet of right-of-way.

3. Rural Major Collector: These two lane highways provide service to large towns/villages, or other major traffic generators not served by the arterial system. They provide links to the higher classified routes and serve as important intra-county travel corridors.

   Design Policies

   a) Minimum 12 foot wide travel lane recommended.

   b) Entrance controls should be utilized where there is high traffic generating roadways. Such controls may include turn lanes, signals, signs, combined access points, and service or internal roads.

   c) On-street parking is prohibited.

   d) Access points should be limited to 900 foot intervals where possible.

   e) Residential lot access from individual properties should be minimized.

   f) Rural Major Collectors have a 60 foot right-of-way width unless otherwise specified.

4. Rural Minor Collector: These two lane highways collect traffic from local roads and bring all developed areas within a reasonable distance of a collector road. They provide service to small communities and link important local traffic generators with the rural areas.

   Design Policies

   a) Roads to be spaced at intervals, consistent with population density, to collect traffic from local roads and bring developed areas within reasonable distance to a collector road.

   b) Direct access should be limited wherever it is possible, except in Villages and settlement areas where shared access points or other access modifications should be utilized to keep direct access points to a minimum along the collector road.

c) Private or public local street access points should be limited to 600 feet intervals where possible.

d) Rural Minor Collectors typically have a 50 foot right-of-way width.

e) New lots in subdivisions should be served by internal public streets in accordance with VDOT subdivision street requirements.

COUNTY RURAL ROAD CLASSIFICATIONS

Map 10.1 County Rural Road Classifications delineates the planned road classifications as put forth in this chapter.

COUNTY DESIGNATED SCENIC ROADS AND VIRGINIA BYWAYS

Map 10.2 delineates roads that are designated as Virginia Byways and County designated scenic roads. Although these roads differ in functional classification, it is intended that none of these roads be altered except within their existing right-of-ways and then only to the extent necessary for public safety. It is the policy of Fauquier County that these roads be protected and preserved to the greatest extent possible.

The County is in the process of reviewing additional roads for Virginia Byways and Scenic High ways designation. The County is also reviewing criteria for designation of County designated scenic roads, as well as Highway Overlay Districts.

TRANSPORTATION PLAN

The Service District Plans were all developed through their individual Citizen Planning Committees. Refer to Chapter 6 for the detailed transportation elements and recommendations regarding each Service District. This section provides a composite of the key links within these districts (Bealeton, Calverton, Catlett, Marshall, Midland, New Baltimore, Opal, Remington, and Warrenton).

Bealeton–Opal–Remington Service Districts and the Catlett–Calverton–Midland Village Service District

The four stage process for conceptual roadway/transit/rail improvements for this integrated area of the County is illustrated on Maps 10.3a through 10.3e. Map 10.3e represents the adopted transportation elements of the Comprehensive Plan for Southern Fauquier County, including the safety improvements for specified intersections along the length of Route 28 in Catlett, Calverton, Midland and Bealeton Service Districts.

Each map organizes the roads in accordance with their functional classification (Rural freeway, Rural principal arterial, Rural minor arterial, Urban collector or major collector, plus related rail facilities) and illustrates the specific actions or improvements expected at that stage. The roadway improvements follow three sequential action levels in this map series: (1) proposed and subject to alignment studies (dotted lines); (2) right-of-way acquisition (dot/dash lines); and (3) completed construction (solid lines). Some designated roads may even have discrete sections that may be under different sequences. For example, certain sections of a designated road may be under alignment study, another under acquisition, while another portion has been fully constructed.

Stage 1

This stage, shown on Map 10.3a, represents Stage 1. The following actions are needed:

1. In lieu of VDOT funding for the interchange adjacent to the Liberty High School and planned Bealeton Town Center at the Route 17/28 intersection, VDOT and the County should aggressively pursue an alignment study for the Route 17 connector to U.S. Route 15/29 (Bealeton Connector; limited access rural freeway);

2. Acquire right-of-way for Church Street in Bealeton;

3. Continued Commonwealth Transportation Board (CTB) funding priority for the partial interchange flyover south of Opal;

4. Study alignments for a parallel connector west of the Norfolk & Southern Railroad, from the Warrenton-Fauquier Airport, generally following Route 805 (Bealeton Road) to Route 17; and

5. Pursue other signal and safety/widening projects (examples: additional traffic signalization and turn lanes at Route 17/28 intersection; convert the flashing signal at the U.S. 15/29 and Route 651 intersection in Remington).

More technical study is needed to determine how to upgrade existing U.S. Route 15/29 extending from Warrenton through Opal to Culpeper County as a rural freeway with interchanges replacing traffic signals. More priority attention also is needed on the part of both VDOT and the County on how to separate the conflicts represented by mixing high volumes of regional through and local traffic using creative access management along future rural freeway corridors. These long-term road improvements need to be reflected in the County's priorities for VDOT's Six-year Secondary and Primary Road Funding Program.

Stage 2

This stage, shown on Map 10.3b, builds upon Stage 1. Here, Fauquier County must actively reserve designated existing and new roadway corridors identified in the Comprehensive Plan through land use application decisions and other actions. Examples of a few principal efforts are focused on the:

1. Widening of U.S. 15/29 (6-lanes), Route 28 (widening to 3 or 4-lanes between its eastern intersection in Bealeton with Route 17 on to its intersection with U.S. Route 15/29);

2. Acquisition or dedication of right-of-way for the limited access Bealeton Connector (This action allows some rights-of-way (r-o-w) to be secured from developer applicants for the construction of future roads); and

3. A freeway alignment study for the airport connector to the Route 17/Bealeton Connector intersection.

As traffic increases on U.S. Route 29/15/17 north of Opal, VDOT must pursue a six lane divided widening project to coincide with opening the new U.S. Route 17 connector partial interchange preferred as a single phase project. Map 10.3c demonstrates how this single phase project and Route 17 could be generally designed. Here it is recommended that the current VDOT's flyover design in Opal be expanded into a second phase project element in a subsequent VDOT funding cycle. The refinement would still continue with the realignment of Route 17 to the current location of the grade separated facility, but with the following alterations:

4. Include northbound movements as illustrated in Map 10.3c; and

5. Do not terminate the existing U.S. Route 17 (Business) in a cul-de-sac. Use traffic calming designs and develop an intersection with the realigned U.S. Route 17. Such a plan provides improved business community access.

This plan is consistent with the currently adopted Comprehensive Plan in that it delivers both north/south Route 17 relocations at one time and the old section of U.S. Route 17 (now U.S. Route 17 business) is not closed as a cul-de-sac. Instead of having a cul-de-sac that significantly constrains local access, a traffic signal is installed on Route 17, when warranted.

Stage 3

This stage shown on Map 10.3d continues to build upon Stages 1 and 2. VDOT cooperates by following future roadway alignments shown on the adopted Comprehensive Plan. This introduces an element of stability into the strategic transportation planning and funding process that currently does not exist.

Stage 4

This stage is reflected as Map 10.3e and indicates the actual construction of the limited access U.S. Route 17 connector to U.S. Route 29/15 (Bealeton Connector). It also demonstrates important commitments to upgrade a section of U.S. Route 15/29 (and now U.S. Route 17 relocated) to a freeway between Remington and Opal. Funding using State Revenue Sharing is used to deliver Stage 1 of the secondary road for improved airport access.

This stage also represents the important expanded or new roadways which are built so local and regional through traffic is permanently separated. By eliminating the negative impact of through traffic, the quality of life in all the Service Districts, except Catlett and Calverton, would be significantly improved.

At this time, VRE, bus and express bus service would be implemented. VRE stations in Bealeton and Remington also reinstate the historic function and character to the communities. By eliminating through traffic from local traffic local access to/from the VRE stations would be significantly safer and more efficient.

Roadway/transit improvements, which are kept consistently on the County's Comprehensive Plan, would deliver a future mobility strategy that actually separates local and regional (through) traffic. This mobility strategy could more effectively deliver more quality communities and permit safer and more efficient pedestrian, bicycle and transit movements within and between the Service Districts.

This plan would significantly enhance expanded airport access that would probably play an important role in the Fauquier County economy by 2020. Finally, expanding designated roadways with adequate r-o-w, or building new roadways on new alignments, results in existing local businesses not being displaced; making the total cost of road building less costly. Any advance purchase of needed future r-o-w or developer's land reservations/donations would also reduce road costs.

It needs to be noted that there are future new road alignments which are partially or entirely located outside the designated service district boundaries. Specifically, these roads include Route 805-Major Collector; Warrenton-Fauquier Airport-Minor Arterial/Freeway connection to Route 17 and the Bealeton Connector, which is proposed to serve as a limited access Freeway connecting Route 17 with U.S. 15/29. Where these proposed alignments are located outside designated Service District boundaries, County policy states that these conceptual roadway corridors do not represent future extension limits of these districts, but only roadway locations. These new corridors are planned to more effectively redirect regional traffic from the

communities of Bealeton, Remington and the County airport facility, located in the Midland Service District, to key existing highway routes.

FUTURE VIRGINIA RAILWAY EXPRESS AND EXPRESS BUS SERVICE

Future rail service and express bus to rail service is targeted for the Fauquier County area. Both services are considered to be valid assumptions for planning purposes in the Virginia Railway Express (VRE) Strategic Plan (July 14, 2003). VRE ridership is growing at a rate of 18% per year. This strategic plan indicates a support for any efforts that merge the VRE system with the MARC system in Maryland. Such an action would provide MARC rail service to Union Station/Alexandria and VRE service would extend to Rockville, Maryland.

The first series of steps over the next five years are to identify costs, ridership fees and supplemental methods to cover expenses, identification of accessible pick-up points, and then consider implementation of an express bus service on a trial basis through the Potomac and Rappahannock Transportation Commission (PRTC). During this period of service analysis, the County and PRTC will initially need to consider use of existing and designated commercial parking, Park and Ride sites, and other public parking locations for selected service areas, and integrate, for example, with the PRTC's existing Linton Hall service.

If the express bus program proves successful and the usage demand is appropriate, then the Board of Supervisors and the PRTC certainly would consider service expansion. This complex stage would include the requisite cost analyses, phased budgeting, acquisition, construction and dedication of permanent parking areas for commuters, as well as the essential bus staging location (e.g., secure bus housing for fueling, washing, vacuuming and overnight parking) and other essential elements needed for effective service expansion.

Virginia Railway Express (VRE) expansion to Gainesville and Haymarket in Prince William County is anticipated. VRE already exists in that corridor at Broad Run, and its westward service extension is a natural progression due to the population density and business scale centered and planned in that urbanized location. Also assisting in that progression are the major

financial investments represented by the public transportation improvements for I-66 and planned grade separation improvements associated with the U.S. 29 corridor.

The 2003 VRE Strategic Plan identified expansion into Fauquier County, as a future option, along the Norfolk Southern Piedmont main line from the current terminus at Broad Run to either Bealeton or Remington. The latter plan states that due to "the potential for transit-oriented development at Remington, this is likely to be the preferred terminus for VRE service extended in Fauquier County".

The VRE Strategic Plan also indicated that three stations are assumed along the potential extension route. Those stations are: "Remington, Bealeton and one intermediate park and ride station that could pick up commuters driving from the Warrenton/New Baltimore area. Daily ridership by 2025 is projected to be in the range of 1,100 to 2,000 daily trips, with the higher figure representing more aggressive assumptions with respect to transit-oriented development and induced demand. A total of 600 to 800 parking spaces would need to be developed at the three station locations." It needs to be noted that rail service is not a practical option and exception at this time in Fauquier County. Such service needs a major financial investment with the PRTC and the County, as well as a far larger population and ridership base.

MIDLAND AIRPORT MASTER PLAN AND ACCESS

The Warrenton-Fauquier Airport is located just off Route 28, near the village of Midland, some 12 miles south of Warrenton, and was purchased by Fauquier County in 1992. The airport is home to 125 aircraft, and base for more than 36,000 flights per year. Following airport purchase, Fauquier County hired engineering consultants and the following documents were completed:

- Master Plan (1993);
- Environmental Assessment (1997); and a
- Finding of No Significant Impact Report (1998).

These plans and reports set the stage for significant airport expansion, the first phase of which is presently underway; specifically a major overhaul of the runway. This project includes a 5,000 x

100 foot facility with full complement of taxiways and aprons, and the construction of additional airplane hangars. Later phases of development include more hangars and a terminal facility, as well as continual upgrading of navigational instrumentation. The purpose of these improvements is to serve general aviation (corporate) aircraft with wing spans of up to 79 feet, and a gross weight of up to 70,000 pounds, such as the Gulfstream III, Falcon 50 and the Cessna Citation – the classic corporate aircraft categories.

The improvements are to be financed in part through an Airport Enterprise Fund, whereby revenues generated in the Airport are used to enhance the facility, so that the Airport is not a burden to County taxpayers. Capital outlays from the Enterprise Fund serve as leverage for funding and grants available through the Federal Government and the Commonwealth of Virginia. In overall terms, the Enterprise Fund is currently used as a 2% match, to an 8% Virginia Commonwealth Aviation Facility Program, and a Federal 90% Airport Expansion Program.

The Warrenton-Fauquier Airport is eligible for these moneys since the Federal Aviation Authority (FAA) designated Warrenton-Fauquier Airport as a "General Aviation Reliever Facility" to Dulles International Airport within the National Plan of Integrated Airport Systems. This designation means that corporate aircraft will be increasingly encouraged to vacate Dulles International Airport, as that airport's runways become largely used by cargo and commercial passenger airlines. The value of a reliever airport network has been enhanced post September 11, 2001. For security reasons, very severe restrictions have now been imposed on corporate aircraft within 50 miles of the Federal Triangle. The County facility is just beyond this radius. Migration of corporate aircraft to the airport would benefit both the locality and the Capital's security.

In addition to the financial assistance provided by the Virginia Commonwealth and the Federal Authorities, the designation of Reliever Airport status has an additional, if indirect advantage. Executives using corporate airplanes tend to be those who make decisions about the location of their own business facilities. As Dulles International Airport becomes ever busier and corporate

aircraft experience longer runway delays, these executives will ultimately decide to home-base their jet at a reliever airport.

The Warrenton-Fauquier Airport is well positioned, and has available land zoned for offices and light industrial development in the vicinity. To assist in the economic development of this facility and to serve adjoining industrial properties, the Airport Board and Board of Supervisors has implemented limited public sewer service to 20 industrially zoned properties around the airport as well as provide for the airport's needs. No County General Revenue or Airport Enterprise moneys will be used to construct this treatment facility; for it will be financed by the served property owners.

Airport Access

In the future, the plan relocates Route 28 to the south of the railroad right-of way and provides the Airport with a minor arterial road with the capacity to accommodate both through and employment-industrial traffic to the designated non-residential land bays that surround the Airport. This relocated Route 28 would more effectively link the industrial and planned employment land surrounding the Airport with Routes 17 and 29, without disrupting Bealeton and Midland.

FUTURE BICYCLE/PEDESTRIAN ROUTES

The Board of Supervisors adopted the Preliminary Bicycle and Pedestrian Facility Assessment Plan for Fauquier County in 2001. That plan, and as it is periodically updated, is incorporated into this chapter by reference. The Assessment Plan highlights relevant opportunities in all Service Districts, and it represents an iterative process for improving pedestrian and bicycle access countywide.

Fortunately, information developed in this report needs to be considered in the strategic planning for future transportation systems. Such coordinated multimodal planning will result in safer, more efficient, long-term local access separated from through traffic. As with highway planning, bicycle and pedestrian planning needs to be coordinated with VDOT.

TRANSPORTATION STRATEGIES

Map 10.4 identifies the other transportation areas needing special focus within the County, and they are discussed briefly herein.

Traffic Calming

Fauquier County residents continue to express preferences for lower speeds and a variety of traffic calming measures along neighborhood streets and key roadway locations countywide. This results from the growth of regional traffic and commuting to Northern Virginia employment centers. The intended objectives of integrating traffic calming measures into transportation systems planning are to:

1. Achieve slower, safer speeds for motor vehicles and require drivers to observe posted speeds;
2. Reduce collision frequency and severity;
3. Improve the real and perceived safety for non-motorized users of the street;
4. Provide more greenery (e.g., trees, shrubs, and associated materials);
5. Increase access to land uses for all modes of transportation; and
6. Reduce cut-through motorized vehicle traffic.

Traffic calming measures physically alter street design. Examples of these potential alterations are: (a) speed humps, raised intersections (vertical design changes); (b) traffic circles (Roundabouts), lateral shifts in street design; (c) small corner radii; (d) narrow pavement widths and medians; and (e) related streetscaping (surface textures/specialty paving, landscaping and lighting).

Street Furniture, Parking, and Landscaping

Specialty Paving for Pedestrian Crossings

The County, within its Service Districts, villages and settlements, intends to continue its efforts to provide well planned vehicular and pedestrian access in ways to minimize their natural conflict with open and basic street functions for safer pedestrian use, shopping and employment and service access opportunities.

Both Loudoun and Fauquier Counties participated in a creative Traffic Calming Plan for the Route 50 Corridor from Aldie to Upperville, which has been approved and received both federal and state funding implementation commitments (refer to Area 1 in Map 10.4). It includes roundabouts and typical design elements for this rural location, with elements that are transferred well in concept to other locations.

The roundabout has promise already as an option the County wants to implement in key locations. The design more applicable to this rural community is the “Mini-Roundabout” and “Urban Compact Roundabout”, which are both used in low speed environments of 35 miles per hour. These are single lane movement in design, pedestrian friendly with short crossing distances and very low vehicle speeds to accommodate passenger cars (refer to the graphic provided). According to the Federal Highway Administration technical documents, the single land movement roundabout design capacity is for no more than 1,800 vehicles per hour.

The New Baltimore and Marshall Service Districts have designated locations for roundabouts (refer to Chapter 6 and their respective transportation elements); while Vint Hill in New Baltimore has several planned in its internal street network.

U.S. 15/29 Coordination

Prince William County is experiencing major residential development along its Route 15 corridor, as well as significant planned commercial and residential growth within its Gainesville-Haymarket Sector Planning area. Here major regional transportation improvements are planned, including an interchange and the 6-laning of I-66 from its intersection with Business Route 234. With the historic and National Register sites represented by the Manassas Battlefield and the Village of Buckland, improvements planned for U.S. 15/29 corridor are severely constrained.

Growing regional and Fauquier County traffic trying to access U.S. 29, Route 15 and I-66 are facing increased congestion and limited options to reach Northern Virginia or other destinations, due partially to this emerging regional bottleneck and reliance on motor vehicles as the primary transportation mode. Both Fauquier and Prince William Counties must proactively coordinate their land use and multi-modal transportation planning efforts at their boundary edges as a continued and high action priority (refer to Area 2, Map 10.4).

Route 28

Refer to the Catlett, Calverton and Midland Village Service District Plans for the transportation details. However, the main recommendations for this Rural Minor Arterial are that the specified intersectional safety improvements need to be installed as they are warranted.

Route 28 is currently a two lane road providing access from Route 15/29 east to Prince William County and ultimately to Route 7 in Loudoun County. This corridor passes directly through three of the County's planned Village Service Districts, namely Catlett, Calverton and Midland. It is anticipated that Route 28 will need to be expanded to 4 lanes in the long-term, with planned stages starting in Prince William County and based upon the availability of state funds and traffic volumes. It is suggested that the ultimate alignment of Route 28 may require supplemental study by the County and VDOT. Any future study of this corridor should take into account the need to preserve agricultural production, which is currently taking place around these three communities. Any impact to the agricultural industry in this area should be studied as a part of any options which may arise. In addition, such a study should include plans for preserving the current businesses in these service districts.

U.S. 15/29 Access Management

The Route 29 corridor is currently a four lane divided roadway which moves traffic through the County, providing access to adjacent jurisdictions as well as to the greater Washington area. This important link currently has numerous traffic signals and only existing one grade-separated interchange in the County. In addition, a long-range examination of this corridor should consider options for future alignments. Of concern to the County is the easternmost portion of Route 29 which passes near the Village of New Baltimore, which is listed on both the Virginia Landmarks and National Register. As suggested within the New Baltimore Service District Plan, this easternmost portion of Route 29 needs some realignment to the north in order to address many safety concerns which have arisen due to the current configuration.

A Route 29 corridor study, brought about by the Inter-modal Surface Transportation Efficiency Act (ISTEA), is underway. The initial area of study includes the corridor from Albemarle County and to the north of Warrenton. It is recommended that this study be expanded to include all of Route 29 in Fauquier County.

This entire route from our border with Prince William County on through Culpeper County is planned in the long-term as a Rural Freeway, with limited access (reference: Map 10.4, Areas 2 to 5). The number of allowed median cuts and the traffic signalization along major arteries also needs to be carefully assessed and limited for future development. VDOT has completed a Safety Improvement Plan for Crossovers along the entire length of this key roadway, including the proposed designation of existing and unsafe median cuts that will need to be closed in the future. This technical document, and as revised through time, is made part of this plan by reference.

Route 605 Corridor Plan

Route 605 is currently a two lane road on which traffic has markedly increased over the past ten years. Route 605 plays an integral part in moving traffic both to and from Warrenton and northward on Route 29 towards the Washington area. Route 605 is planned to be a Rural Major Collector, and it serves as major component of the New Baltimore/Warrenton area by eventually tying into Route 29 with a new signalized intersection or a grade separated interchange (see the

New Baltimore and Warrenton Service District plans for further information). In the long term, it is expected to become a 4-lane roadway from the vicinity of Route 602 to U.S. 15/29.

In addition to providing access to the north, east and west, Route 605 also provides an important link to Route 28 to the south. As a part of this long-range plan, the County will be examining this important link to the south as well as the entire Route 605 corridor.

Regional Coordination

Planning and development in other jurisdictions certainly impact the existing road network in Fauquier County, as commuters and vehicular traffic travel to their individual or business destinations both inside and outside our community (Map 10.4; Areas 4-8). Here the County needs to participate in regional planning and development policy efforts as a member of the Rappahannock-Rapidan Planning Commission.

Street Design

Standards for street design in the Fauquier County Subdivision and Zoning Ordinances need to be consistent with the Comprehensive Plan, and amended to reflect current VDOT subdivision street requirements and associated documents, as they are periodically updated. Village, settlement, as well as neighborhood and town center planning within Service Districts have noted a need to make local and neighborhood streets scaled to be more pedestrian friendly and compatible to a mix of community land uses and activities, and to result in less impervious surfaces.

Even though safe access and vehicular movement is an important objective, village or designated town centers simply will require and demand more creative street and access designs to maintain the expected residential, community character, scale and density. Illustrations from the SMART CODE deserve further County technical review with VDOT and integration into the development design manuals. Figures 10.1 through 10.4 are examples of traditional town and village designs that detail suggested pavement widths, street parking and right-of-way dimensions.

STRATEGIC ACTIONS

This proactive countywide transportation planning approach will ensure that the existing service districts and villages can actually achieve more compact and pedestrian scaled communities, a better quality of life, and continued economic achievement. The success of this plan requires VDOT's participation and cooperation for a sustained period of time. In addition, the strategic approach demonstrates the need for long range Federal Highway Administration (FHWA) funding through the stability it offers and the safety conscious planning (SCP) it introduces.

By following a strategic plan for a sustained period of time with refinements introduced from time to time, the county will achieve the following objectives in the service districts:

1. Provision of quality business and community residential neighborhoods;

2. Separation of local and through traffic;

3. Better use of limited roadway funds for studies, rights-of-way acquisition and construction;

4. More efficient and safe operating conditions when future VRE, bus and express bus service is provided;

5. More efficient, planned and safe bicycle and pedestrian facilities and movements within the service districts;

6. Less impact on local businesses by committing to a viable long range plan, making sure it is implemented and not compromised;

7. Less citizen opposition to plan implementation because citizen groups were involved in the planning process and their involvement will be sustained as the plan is updated;

8. Due to it's creative approach of integrating both land use and transportation it may be possible to secure FHWA funds to refine the plan using a travel demand model like TMODEL2, or to receive VDOT funding incentives by abiding by access management and National Highway System guidelines; and

9. Enhanced Midland airport access will provide long term economic benefit to both the County, Virginia and the United States government.

To implement the overall highway/bus/VRE transportation plan, the following prioritized actions are suggested.

Priority 1: Signalization at the U.S. 15/29 and Route 215 Intersection and Route 215 Improvements

The improvements are multi-phased: (1) Install the warranted and requisite traffic signalization at the U.S. 15/29 and Route 215 intersection due to continued turning movement accidents; (2) Identify, reserve and construct a realigned Rt. 215 to U.S. 15/29; and (3) Plan and construct the grade separated interchange at the realigned intersection of Route 215.

Priority 2: VDOT U.S. Route 17 Interchange Project at Opal

Request that the Commonwealth Transportation Board (CTB) allocate funds to build the partial interchange VDOT project at Opal as soon as possible as a single phase project, with no cul-de-sac on existing U.S. Route 17 (Refer to Map 3.c). Also advise the CTB and VDOT that this project should recognize the need to later extend U.S. Route 17 (relocated) west to a possible U.S. Route 29/15 rural freeway to be built west of U.S. Route 29/15, making sure it is located in coordination with any U.S. 15/29 corridor alignment changes in Prince William County.

Priority 3: VDOT U.S. Route 17 Connector Project

The County fund a preferred conceptual alignment study for the Bealeton Connector (corridor from Route 17 to U.S. 15/29), and present the results to VDOT for further technical studies; then

Request that the CTB have VDOT fund a roadway alignment study (including 20 year traffic projections) to extend U.S. Route 17 on a new alignment south of Bealeton and north of Remington to the U.S. Route 29/15 corridor. This new limited access corridor should recognize the need to have a grade separated interchange at relocated U.S. Route 17/29/15 and VA Route 28 and ultimately a grade separated interchange at U.S. Route 17/17 business south of Bealeton.

Priority 4: VDOT VA Route 28 Project

Request that the CTB have VDOT fund a study to develop plans to upgrade intersections along the VA Route 28 corridor between U.S. Route 29/15 and a point east of Liberty High School, i.e. the eastern edge of the Bealeton Service District. These are described as "safety" improvements within the Calverton, Catlett and Midland Village Service District Plans.

Priority 5: Redesign of the I-66 Interchange at Route 17

Request the redesign of the I-66 interchange in the Marshall location to accommodate the increasing truck volumes. In order to protect the visual character of the community, the design should be a cloverleaf or a "fly-under" design, and not the typical "fly-over design".

Priority 6: Land Development Regulations

Update roadway definitions and resolve the differences between VDOT subdivision standards and County Subdivision and Zoning Ordinance standards. Provide better coordination of document text regarding roadway requirements between the County's land development regulations and the comprehensive plan.

Priority 7: Fauquier County/VDOT Low Cost Improvement Program

Perform AM and PM peak hour turning movement counts for specific timeframes (e.g., every 3-years) or use available data from Traffic Impact Studies to establish updated and representative AM and PM peak hour volumes and levels of service for designated locations in Bealeton, Marshall, Opal, and Remington. These Service District locations are subject to the TMODEL 2 (traffic impact model).

Priority 8: Fauquier County Traffic Demand Modeling Program

Bealeton, Marshall, Opal and Remington are the test Service Districts for the TMODEL 2 program. To aid in the review of traffic impact studies for new development projects and to aid in the updating and refinement of the service district plans, this program will be calibrated and operational by spring of 2005. The model can also be used to evaluate build-out land use scenario changes and to establish a more rigorous and detailed future roadway network. The

model will also have an added element which will be able to establish the regional transportation network costs resulting from proposed rezoning applications.

MAPS & FIGURES

Map 10.1: County Rural Road Classifications

Map 10.2: Virginia Byways and Scenic Roads

Map 10.3a: Southern Fauquier Transportation Plan Stage 1

Map 10.3b: Southern Fauquier Transportation Plan Stage 2

Map 10.3c: U.S. 15/29 Flyover and Access

Map 10.3d: Southern Fauquier Transportation Plan Stage 3

Map 10.3e: Southern Fauquier Transportation Plan Stage 4

Map 10.4: Regional Transportation Access Corridors Graphic

Figures 10.1, 10.2, 10.3, 10.4: Roundabouts & Streets